R. 4/0008
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**Amendment to Reclamation Plan for US Gypsum Company Jumbo-Jensen Quarry M041008, Sevier County, Utah**

A pile containing approximately 180,000 cubic yards of refuse gypsum wallboard is to be relocated to the Jumbo-Jensen mining area as inert fill for the purpose of mine reclamation and topographic restoration in mined areas. This activity can be viewed as an effort to return processed gypsum back to its original source area. A small portion of this material is used for recycling purposes, but this activity has minimal impact on annual reduction of the pile volume.

The wallboard refuse consists of manufactured gypsum product that did not meet quality criteria for marketability. It has accumulated near the USG manufacturing plant site for about 60 years, and needs to be relocated out of the Sevier River floodplain to an alternate, less sensitive location. Placing this material in the mined-out areas will remove this ecological hazard from the river cut bank while enhancing efforts to restore topography/habitat in mined-out areas. Use of this material will also reduce blasting costs associated with topographic restoration in steep, high-wall areas. The current volume of material in the pile is about 15% of the total volume of materials required to be displaced to achieve successful topographic restoration in the mined-out areas, as identified in the revised reclamation plan. This will allow much more flexibility in recontouring and drainage reconstruction.

The optimum location for permanent stowage of inert gypsum wallboard refuse at the Jumbo-Jensen Mine is in the Bowl pit (see map no. 4 SE). The Bowl pit is excavated into shale, gypsum, and anhydrite of the Jurassic Arapien Formation. This formation is a large, fault-bounded block that has been intensely deformed by regional thrust fault tectonics during the Cretaceous Sevier mountain-building episode. Movement of salt beds within the Arapien Shale in response to regional stress accommodation has resulted in deformation of the gypsum and anhydrite strata. Mild seismicity has occurred in the Sevier Valley near Richfield and Salina in response to this salt movement.

The dominant geomorphic processes in this arid climate are slow hydration of anhydrite to gypsum, and development of gullies and alluvial outwash deposits from occasional storms. There are no major aquifers in the mining area because the shaley deposits hosting the gypsum have minimal permeability and exhibit severe topography that is not conducive to water retention. The Arapien Shale is faulted down to the west into the Sevier Valley, and forms the floor of a large alluvial valley-fill aquifer. Recharge into this aquifer is dominantly from seasonal runoff from surrounding mountain ranges.

The inert materials to be placed in the quarry will rest on a floor of anhydrite, which is generally impermeable: it cannot exist in the presence of significant amounts of free water. Therefore, the material will have minimal impact potential on regional aquifers and contains a minimal amount of material that is not gypsum.

The inert refuse wallboard material will be emplaced by truck in the Bowl pit and compacted in lifts. Cover materials will consist of local soils and rock for armoring. Material stability and characterization is detailed in the attached supplementary report from the USG Plaster City, CA gypsum pile site. The report sites precedent and procedures for a gypsum product landfill grading plan, compaction criteria, and closure cover system. The report forms the core plan that USG will

employ at the Bowl pit site. The proposed seed mix for the Jumbo site will not deviate from the original Notice of Intention.